Amendments to the Claims:

A clean version of the entire set of pending claims, including amendments to the claims, is submitted herewith per 37 CFR 1.121(c)(3). This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Canceled)

2. (Currently Amended) A method to determine the spatial distribution of magnetic particles in an examination area of an object, comprising:

a) generating a first magnetic field having a field strength with a spatial distribution such that the first magnetic field has a lower magnetic field strength in a first sub-area of the examination area and the first magnetic field has a higher magnetic field strength in a second sub-area of the examination area, and wherein a gradient of the first magnetic field reverses direction and experiences a zero crossing within the first sub-area,

b) changing the spatial location of both the first and second sub-areas in the examination area, including changing a location where the gradient of the first magnetic field reverses direction and experiences a zero crossing within the first sub-area, so that a magnetization of the magnetic particles changes locally,

c) acquiring signals that depend on the magnetization of the magnetic particles in the examination area influenced by the changed spatial locations of both the first and second sub-areas in the examination area, and

d) evaluating said signals to determine the spatial distribution of the magnetic particles in the examination area, wherein before or during the determining of the spatial distribution of the magnetic particles in the examination area the magnetic particles are exposed to a second, ~~line-varying~~time-varying, magnetic field so as at least to reduce agglomeration of the magnetic particles.

3. (Previously Presented) The method of claim 2, wherein the second magnetic field is superimposed on the first magnetic field at least some of the time.

4. (Previously Presented)The method of claim 2, wherein a strength of the second magnetic field is sufficient to cancel out attractive forces resulting in the agglomeration of the magnetic particles in the examination area.

5. (Previously Presented) The method of claim 2, wherein the second magnetic field varies in time in all three spatial dimensions.

6. (Previously Presented) The method of claim 25, wherein the particles have an average size or expansion of at least 30 nm.

7. (Previously Presented) The method of claim 2, wherein the second magnetic field is applied in a locally restricted portion of the examination area until the agglomeration of the magnetic particles in at least the locally restricted portion of the examination area is reduced.

8. (Previously Presented) The method of claim 2, wherein the second magnetic field has a frequency in a range of approximately 10 to 500 kHz.

9. (Previously Presented) The method of claim 2, wherein the field strength of the second magnetic field is at least two times greater than the field strength of the first magnetic field.

10. (Previously Presented) The method of claim 2, wherein the magnetic particles are monodomain particles and wherein the field strength of the second magnetic field is at least 30 mTesla.

11. (Previously Presented) The method of claim 25, wherein the magnetic

particles comprise a nonmagnetic core covered with a magnetic coating and wherein the field strength of the second magnetic field is at least five mTesla.

12. (Previously Presented) The method of claim 2, wherein the second magnetic field has a power of at least 500 W and is applied in intermittent pulses such that the average power input is less than 500 W.

13. (Previously Presented) The method of claim 2, wherein the second magnetic field is applied as one or more pulses having an amplitude that decays to zero.

14. (Previously Presented) The method of claim 2, wherein the magnetic particles are in a liquid medium in the examination area and a frequency of the second magnetic field is chosen in view of a viscosity of said liquid medium.

15. (Currently Amended) The method of claim [[13]]14, wherein the medium surrounding the magnetic particles is blood and a frequency of the second magnetic field is between 0.7 and 1.3 MHz.

16. (Previously Presented) The method of claim 2, further comprising administering the magnetic particles to the examination area, wherein the second magnetic field is applied to the magnetic particles before administering the magnetic particles to the examination area.

17. (Previously Presented) The method of claim 2, further comprising administering the magnetic particles to the examination area, wherein the magnetic particles are administered to the examination area in an agglomerated state and wherein the magnetic particles in only a part of the examination area are de-agglomerated by exposing only said part of the examination area to the second magnetic field.

18. (Previously Presented) The method of claim 2, wherein a frequency of the second magnetic field is between 0.8 to 1.2 times a frequency of the first magnetic field and wherein the second magnetic field and the first magnetic field are alternately applied to the examination area.

19. (Canceled)

20. (Previously Presented) The method of claim 25, wherein at least one of the magnetic particles is a multi or mono-domain particle that is capable of being reverse magnetized by at least one of Neel rotation and Brownian rotation.

21. (Previously Presented) The method of claim 25, wherein at least one of the magnetic particles is a hard or soft magnetic multi-domain particle.

22. (Previously Presented) An apparatus to determine the spatial distribution of magnetic particles in an area of examination of an object, the apparatus comprising:

a) means for generating a first magnetic field with a spatial distribution such that the first magnetic field has a lower magnetic field strength in a first sub-area of the examination area and the first magnetic field has a higher magnetic field strength in a second sub-area with a higher magnetic field strength of the examination area, and wherein a gradient of the first magnetic field reverses direction and experiences a zero crossing within the first sub-area,

b) means for changing the spatial location of both the first and second sub-areas in the area of examination, including changing a location where the gradient of the first magnetic field reverses direction and experiences a zero crossing within the first sub-area, so that a magnetization of the magnetic particles changes locally,

c) means for acquiring signals that depend on the magnetization of the magnetic particles in the area of examination influenced by the changed spatial

locations of both the first and second sub-areas in the examination area,

d) means for evaluating the signals to determine a spatial distribution of the magnetic particles in the area of examination,

wherein the means for changing the spatial location of both the first and second sub-areas in the area of examination include means for imposing in at least part of the first sub-area a second, time-varying, magnetic field.

23-24. (Cancelled)

25. (Previously Presented) The method of claim 2 further including introducing the magnetic particles into the area of examination.